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PROCEEDINGS OF THE ROYAL IRISH ACADEMY.

1838.

No. 13.

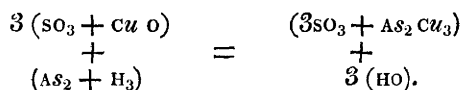
June 11.

SIR WM. R. HAMILTON, A. M., President, in the Chair.

Godfrey Levinge, Esq., John H. Lecky, Esq., William Brennan, Esq., and David Aher, Esq., were elected Members of the Academy.

Dr. Kane read a notice "On the Action of Arseniuretted Hydrogen on Sulphate of Copper, and on the Manganese Alum analysed by Dr. Apjohn."

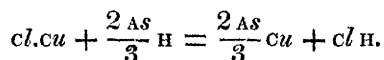
The author stated, that on passing dry arseniuret of hydrogen over dry sulphate of copper, it is absorbed with the evolution of considerable heat; much water is evolved, and a black mass is formed, which consists of sulphuric acid, arsenic, and copper: the whole of the oxygen of the oxide of copper being removed with the whole of the hydrogen of the arseniuret of hydrogen. The re-action is



The formation of this body, appears to Dr. Kane to render probable the idea that a quantity of arsenic equal to one-third of the double equivalent, $\frac{75.4}{3} = 25.13$, combining with metals may form compounds similar to oxides, and thus the body just noticed be a sulphate of that arseniuret of copper.

$so_3 + \frac{2As}{3} + cu$. When this body is put into contact with water, sulphate of water is formed, and arseniuret of copper deposited; this arseniuret being likewise at once precipitated, when arseniuret of hydrogen is passed into a solution of sulphate of copper.

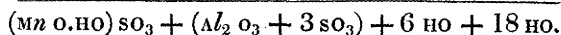
Dr. Kane found also, that when arseniuret of hydrogen is passed over chloride of copper, chloride of hydrogen is set free, and the same arseniuret of copper is produced,



In examining the constitution of the alum, the analysis of which by Dr. Apjohn, was read to the Academy last winter, Dr. Kane found that the water had been estimated by that chemist a little too high; thus Dr. Apjohn gave 48,15, while the true quantity amounts to 47,60. This small variation, however, makes, according to Dr. Kane, an important difference in the theory of the body, as the number of equivalents is reduced to 25 in place of 26: and Dr. Kane looks upon the salt as composed of—

Sulphate of Manganese $mno.so_3.ho + 6 ho$.

Sulphate of Alumina $Al_2 O_3 + 3 so_3 + 18 ho$.



In a temperature of 212° this salt loses 18 ho, and by 300° six of the remaining atoms. The twenty-fifth atom is retained up to 600°: and Dr. Kane looks upon this salt as a remarkable case of the replacement of amide of hydrogen by an oxide of the same class; he further stated that it was by this principle he was led to the repetition of Dr. Apjohn's analysis.

Sir William Betham read a paper "on Etruscan Hand Mirrors," particularly that figured in Dempster's posthumous work *De Etruria Regali*, Vol. I. Tab. I, p. 78, from the original in the Cospian Museum at Bologna.

These mirrors have been found in great numbers in Italy, as well in the sepulchral chambers of the Etruscans as in other excavations. One side was polished for the mirror, the other generally engraved with a representation of some mythological allegory. That under consideration represented the birth of Minerva.

The figures and inscriptions are reversed by the engraver in Dempster's plate.

The author suggests that most of the fables of the Greeks and Romans are but mutilated versions of the allegorical emblems of a previous people, and that people the Etruscans, who, as well as the Celts, were a Phœnician colony. The Umbri have long been considered Celts, and if the Etruscans were the same people, they also were Celts. The former, Sir William thinks, were called *Umbri* from their locality, (om, *distant*, *βρι*, *hills*); they inhabited the remote hilly country of Italy.

In this allegory *Tinia* (Jupiter) is represented in a sitting posture, with the thunderbolt, and the mystic rod in his hands; above his head is the infant goddess, with a shield on her left arm and a spear in her right; before him stands a dressed female figure, with arms elevated towards Minerva, and from her mouth the word THAR, *ταρ*, (*come*), as if inviting the new-born deity. Behind this figure is a female nearly naked, having but a shawl thrown round her middle, and sandaled. In her left hand she holds an axe with a double blade, resting on her shoulder; before her are the words SETH LANM, *πετ λανμ*, (*the hole I cut*.) Behind *Tinia* is another female figure nearly naked, with her arms around the body of Jupiter, as if supporting him, and behind her the word THALNA, *εαλ να*, (*the axe*;) also a tree with a bird, perhaps the eagle, upon it.

Sir William suggested this explanation of the allegory: TI NIA, *τι να*, *the splendid being; the great spirit*, or Jupiter;

ΙΥΔ ΒΙ ΤΕΡ, (ιυδ̄ βῑ τερ), *day's great being*, is represented as a king or warrior, who by the axe of *Bellona*, the goddess or allegorical representation of experience in war, concieves the idea of *military strategy, wisdom, and discipline*, and produces it *from his head*; and Minerva is thus the allegorical representation of wisdom, firmness, and military discipline, produced by the axe of *Bellona*, or experience in war.

The Greeks and Romans, substituting Vulcan's axe for *Bellona's*, seem to have spoiled the elegance of the allegory, unless they meant that armour was the perfection of warlike preparation.

Sir William Betham read a paper "on the Ancient Tomb recently discovered in the Tumulus in the Phoenix Park."

This paper is here inserted without any alteration or abridgment.

"When the Report of the Committee of Antiquities on sepulchral monuments recently discovered in the Phoenix Park, was read to our last meeting by Mr. Petrie, I ventured to object, at the moment, to the meaning therein assigned to the name of the hill *Knock-Mary*, (cnoc mapaiðe), the *hill of the Mariners*. It struck me that the trouble and expense of time necessary to construct this monument were not likely to have been expended on the bodies of *two mariners*, and, therefore, I suggested, that the meaning was most probably cnoc ma pið̄, the *hill of the good king*, or meap pið̄, the *fortunate, lively, active, or successful prince*; either of which characters appeared to me to suggest a more probable origin of the name than that assigned in the Report of the Committee.

"The Rev. Mr. Otway stated, that the name of *Knock-maroon*, another hill in the neighbourhood, had reference to *mariners*; and that certain hills in the neighbourhood of Sligo, which he had recently visited, bore like names, and contained similar monuments, though of much larger dimensions.

"These statements from individuals of acute judgment and

correct observation on such subjects, induced me to hesitate as to the accuracy of my own conclusions, but did not convince me of the correctness of theirs. I have since considered the subject more at leisure, and am now convinced that neither of the opinions expressed at our last meeting was correct.

“But before I enter upon the question of the meaning of the name, I shall say a few words on the probable period of the erection of the monument itself, and of the people concerned in its construction.

“The circumstances and manner of its formation, as well as the urns of unburned clay, the small *flint knife*, and other considerations, convince me that the work was not constructed by the Celtic Irish,—I mean the people whose language is now called *Irish*, and spoken among us,—but by a previous people who inhabited the island at the first arrival of the Celts, and were known by the name of *Firbolgs*, or *Belgæ*. The shells which were found suggest a meaning for this name of that people, which is, I believe, quite new, at least it is so to me. The name of *Firbolg* has generally been rendered *peap*, a man, *bolg*, of a bag, pouch, or sack, and also *bolg*, a boat or vessel made of the skins of animals, a *coracle*; but *bollog* is also a shell, and a round shell, it is also a skull, or bone of the head, intimating a similarity between the two things; the *neritæ* found in this sepulchre are exactly of this character, and seem to indicate that these people were called, by their Celtic conquerors, *peap bollog*, from the circumstance of their wearing an abundance of those shells by way of ornament. They also called them *briat oaoine* painted (or parti-coloured) men, for the reason that they stained their bodies; hence the name *Britain*, given to both the islands inhabited by these people. Their descendants, who by retiring to the north of Britain, were preserved from the annihilation which those of the south suffered from the Celts, were called *Picts*, or *painted men*, by the Romans. It may be, that while

the southern Britons were extirpated, those who inhabited the different northern regions of modern Scotland were able to preserve their independence, and were found by Agricola under the name of Caledonians, a people who were of a florid complexion, and whose other features indicated a German extraction.

“The *Flint* knives, daggers, arrow heads, spear heads, stone hammers, and chisels, which have been found in Ireland, in great quantities, are so exactly similar in form and character to those found in *Funen, in Denmark*, and figured and published by the Northern Antiquarian Society, that those figures on their plates might be taken as correct representations of our Irish articles. A very remarkable instance is to be found in a flint dagger in our own *Museum*, which I now lay before the Academy, with the Danish plate. Denmark was the country of the *Cimbri*, the descendants of the Caledonians: the *Welsh* have ever, and still call themselves by that name. The places in that part of Scotland, of which the Picts last retained possession before their extirpation by the Scotch from Ireland, still abound in Welsh denominations, and seem to me to offer unquestionable testimony, when all these circumstances are taken together with the occurrence of similar monuments in all the British islands, and in Denmark, that they are of the Belgic or Firbolg people; and the Belgæ and Cimbri were people of the same primitive northern race, using stone weapons and tools; perhaps the first inhabitants of these countries.

“I now proceed to say a few words on the name of the hill *Knock Mary*, and its adjoining neighbour, *Knockmaroon*.

“These names being Celtic Irish, and in the language of the nation which succeeded the people who constructed these monuments, could have no reference to the individuals buried, but must have been given to the things themselves, and consequently must have been of a generic character, and applicable generally. The Celtic Irish were the people

who used bronze instruments, and consequently a people more advanced in civilization than the Firbolgs, who built these monuments and used instruments of flint, the most primitive of all; they, however, knew the uses for which they had been constructed, and that they were places or *hills of sepulture*, and called them by that name *cnoc mapb*, or *the hill of the dead*, and *cnoc mapban*, *the hill of the dead bodies*, otherwise, the hill of burial.

“ I cannot bring myself to believe that these monuments were the work of the Danes of Dublin, of Christian times, because the flint knife, and the rude urns of unbaked clay, are indicative of a much earlier period. The Danes of Dublin, and the Scandinavians of that period, were too far advanced in civilization, to justify us in entertaining such a notion as tenable for a moment; and, therefore, I would refer this monument to a most remote antiquity, at least of three thousand years, as certainly the Celtic invasion must have taken place near fifteen hundred years before our era.

“ The character of this monument of antiquity is altogether similar to the Cromlech, and its undoubted sepulchral character would induce the conclusion that all cromlechs were sepulchral, and nothing more than chambers of the dead. New Grange itself would, if denuded, give the appearance of an immense specimen of the sepulchral chamber. It might be worthy of consideration, whether that or some other large tumulus should not have the earth which conceals its structure removed, and the stones left as a demonstrative exhibition: for myself, I think it would be well worth the expense of such an undertaking, if other circumstances did not make it impracticable.

“ The application of the term *altar* to the Cromlech I have long considered very problematical, and *Druid's altar* still more doubtful. I am now nearly convinced that these monuments are not Druidical or Celtic. We have no evidence

from history that the Celts ever sacrificed on such an altar, or even built one; and it is not probable that Cæsar and other writers who treat of the Celts, would have passed over so remarkable a fact, especially as Cæsar, enters so minutely into the ceremonies of the Druids and their religious rites. To enter into this part of the subject fully, would occupy more time and space, and interfere with other subjects which are of more pressing interest to me at this time, but I may be allowed just to observe in this place, for the reasons above stated, that I consider all cromlechs as denuded sepulchral chambers, and that they are the works of the Cymbric Belgæ. I think the evidence we possess on the subject, all tends to induce that conclusion."

Sir William Betham read "A Translation of the fifth Eugubian Table," as numbered by Dempster.

He stated that he considered this Table the first in chronological order, although numbered the fifth; for as the writing of the first five Tables was from right to left, so, he conceived, the numbering ought to have been the same way. Sir William also stated that as he intended to read translations of all the Tables in succession; he would wish to defer the printing of those he had read on the 22nd of January, until the previous Tables had been laid before the Academy.

These Tables Sir William considers as narratives of Etrusco-Phœnician voyages; and as the account of Hanno's voyage along the west coast of Africa, was placed up in the Temple of Saturn at Carthage, so he conceives were these fixed up in the temple at Eugubium, in accordance with the custom of the Phœnician people.

The voyage, of which this table is an account, was from Etruria to *Carne*, in the island abounding in cattle, (Britain). It commences with the departure of the expedition, and tells us that proceeding to *the Mouth* of the Straits, they encoun-

tered an opposing current, which they overcame, and entered *the Port*, (Cadiz), where they got a supply of good water. They sailed again with favourable winds and currents for some time, when they encountered a foul wind, and having succeeded in making the land, they again obtained water, and proceeded on to Carne, where they arrived safely.

The description of the country follows: showers fell frequently, the wind was boisterous, and the sea rough. Nearly west, about a day's sail, was another island country which the men saw on the voyage. The country they were in was green, fertile, and fit for habitation. The frequent showers created many brooks and rivers, which watered the country well. They had plenty of food. They were surprised by an *extraordinarily great fall of the tide*, which left the strand dry; but it was fortunate, as it enabled them to stop the leaks of their ship which were bad.

The island is represented as the largest of islands; and the success of the first attempt is represented as encouraging to future voyagers, the safety of passing the ocean having been demonstrated. They had deers' milk to drink. The country is described as hilly.

The superiority of their seamen and skill depends on being well supplied with food; and much is said about the consequences likely to follow the progress they had made in navigation, and their knowledge of tides and currents.

On their return, when they got to the hot climate, they were attacked with the scurvy, having had no rain for twelve days; but the wind was fair, and the sea favourable. They arrived in safety at *the Mouth*, and entered the Port, (Cadiz), where they stopped three days, and obtained a supply of provisions and water. The *ruddy* appearance of *the Mouth* (*Gibraltar*) is described, and the *favourable current* into the Mediterranean, into which they sailed, and in three days more arrived at their home in safety.

George Downes, Esq., M. A. read a paper entitled "Some Remarks on the *Antiquitates Americana*, lately published in Copenhagen."

The author, after remarking that this volume, which had appeared under the auspices of the Royal Society of Northern Antiquaries, contained an account of the early discoveries of the Northmen in America, stated the two-fold nature of his object :—

1st. To advert to some leading features of the past researches of the Society in connexion with those discoveries.

2nd. To hazard a conjecture respecting their future researches.

The author observed, in the first place, that the present account, although not altogether new, was not only more correct than any other, but supported by evidence, drawn partly from Icelandic MSS. nearly coeval with the principal events recorded, which took place about the opening of the eleventh century, partly from the modern researches of learned Americans. He stated that, as Arctic discoverers of America the Northmen attained as high a latitude as the most distinguished modern navigators ; and detailed the Icelandic geography of the eastern part of North America, from Cumberland Island to the Chesapeake. He next adverted to the Irish part of the same continent, supposed to extend from the Chesapeake to the Gulf of Mexico, and inwards to the Mississippi. This tract was called *Whitemensland*, or *Great Ireland*, and was inhabited by an Irish colony prior even to the Norse ante-Columbian discoverers of America. Evidence of this fact was adduced from the *Antiquitates Americana*, in the form of two traditions :—one held by the Shawanese Indians who had emigrated from Florida to Ohio ; the other by the Faroese islanders. To this evidence the author added a conjecture of his own, founded on the similarity between the first part of the word *Etotiland* (a name of the Icelandic *Vineland*, which does not occur in the work,) and *Scotia*, an old name of Ireland.

After alluding to some passages respecting the mysterious territory of Great Ireland, as given in the adventures of Thorfinn Karlsefne, Gudleif Gudlaugson, and Ari Marson, the author proceeded to animadvert on three inferences deduced from the *Antiquitates Americane*, in a paper read at the last meeting of the Academy.

1. The explanation of the surname of Ari Marson—"son of the sea"—in the ordinary sense of a person of unknown parentage, arrived by ship from some unknown land, was denied to be tenable, as the genealogy of Marson is given in both a textual and tabular form. The figurative meaning—that of one addicted to nautical pursuits, or distinguished for naval enterprise, was also impugned—as likely to be employed in the language of the Celts, who were averse from navigation, but by no means in that of the Icelanders, who were all *sons of the sea*, and among whom domiciliation on board formed even a part of the Viking code of laws. The author added, that the sculptor Thorwaldsen, and Professor Finn Magnussen, were both descended from Ari Marson; and that the name of an Irish princess, called *Ingebiærg* in Icelandic, Ingibœrg in Farvish, but supposed to be Inivaca, also appeared in the genealogy.

2. The author next disputed the identity of Brazil wood with *mazer*, a wood of New England, the Vineland of the Northmen, citing Dr. Bancroft's description of the former. He denied that Brazil-wood had ever been found in a latitude so far north, and contended that intelligent savages usually discover the dye-stuffs within their reach, but that the Skraelings, or Esquimaux, who encountered Thorfinn Karlsefne, bought red cloth from him with avidity, being evidently attracted by the novelty and brilliancy of the colour; that the Skraelings were an intelligent race appeared evident from their possessing a kind of *balista*, and other warlike engines unknown to the Northmen. To refute the possible objection that Brazil wood, if a product of ancient

Vineland, might have been used as an ornamental timber, various passages were translated from the Icelandic, which were accompanied by the opinion of the editor of the *Antiquitates Americanæ*, from which it appeared that the *mazer* was a kind of *maple*, a tree which still flourishes in New England ; and this opinion was further supported by a line from Spenser's Fairy Queen, and by the etymological similarity of the word *mazer* to the Latin *acer*.

3. In reference to an inscription on the Assonet Rock, in Massachusetts, the author alluded to the improbability that Thorfinn Karlsefne—the limit of whose discoveries is supposed to be marked by the rock—would have omitted all mention of his own name in recording them ; and showed that certain letters, on the supposed absence of which another theory had been formed, were present in the most approved copies of the inscription, three drawings of which were exhibited to the Academy.

Mr. Downes in the second place, propounded his conjecture respecting the future discoveries of the Northern Antiquaries in the field of American research. From the similarity both in spelling and meaning of *Haiti*, “highlands,” (the restored name of St. Domingo, or Hispaniola,) to the Icelandic local designation *Heithi*, as well as that of *Bohio*, “the house,” (another name of Haiti,) to the Icelandic *bud*, (the English “booth,”) also used as a local designation in that language, he inferred that the Northmen may have visited the island ; and he showed, from the northern languages, that the final *d*, being mute, occasioned no difficulty. He supported his conjecture by adducing the authority of Doctor Barton, cited by an American correspondent of the editor of the *Antiquitates Americanæ*, as to the existence of rocks similar to that of Assonet, in the confines of the rivers Lata and Maragnon, in South America, on which, however, it would be premature to lay much stress. The probability of a Norse discovery of the West Indies he maintained from some par-

ticulars, connected with the residence of Ari Marson in Great Ireland, which was not far from Haiti.

The author further alluded to the similarity of the Irish *boë*, and the Hebrew *בֵּית* or *בֵּית*, to *Bohio*, and hinted at the possible Irish or Jewish discovery of the island, should the former conjecture prove fallacious.

After recommending the *Antiquitates Americanæ* to the Icelandic student, as a most eligible text-book, and a complete contrast to the *Antiquitates Celto-Scandicæ*, the author concluded by expressing his belief, that a closer connexion with the antiquaries of Copenhagen, and a correspondence with the learned of America, might lead to such results as would shed additional lustre on the annals of the Academy.

DONATIONS.

Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences. Par MM. les Secretaires Perpetuels, Premier Semestre. Nos. 19, 20, 21. *Tables Alphabétiques.* Juillet—Decembre, 1837. Presented by the Academy.

Researches on Heat. Third Series. By James D. Forbes. Esq. F.R.SS. L. & E., F.G.S. (From the Transactions of the Royal Society of Edinburgh. Vol. 14.) Presented by the Author.

The Origin of the Egyptian Language, proved by the Analysis of that and the Hebrew, in an Introductory Essay. By Dr. L. Lowe. Presented by the Author.

Journal of the Statistical Society of London. No. 11. June, 1833. Presented by the Society.